Garrard

LABORATORY SERIES

AUTO TURNTABLE TYPE A

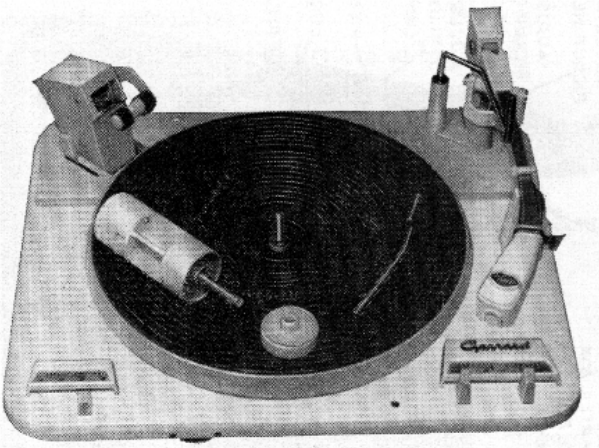
Instruction Manual

GARRARD
SWINDON
TRADE MARK

Garrard

LABORATORY SERIES

AUTO TURNTABLE — TYPE A



Introduction

The Garrard Auto Turntable Type A has been designed to play records singly with Transcription Turntable quality, at the same time having the advantage of being able to play a number of records automatically when desired.

Its styling is ultra modern and special attention has been given to detail, ensuring the best possible performance.

As the owner of this Garrard Auto Turntable Type A, you have a unit whose performance is supreme in its class and rigorous laboratory checks have been applied to your unit to ensure that this high standard is maintained.

This leaflet has been prepared to help you enjoy and maintain the high performance of which this unit is capable.

Should you require any further information or advice not covered by this leaflet, please do not hesitate to ask your nearest Garrard agent or write to our Technical Service Department, Newcastle Street, Swindon, who will be pleased to help you.

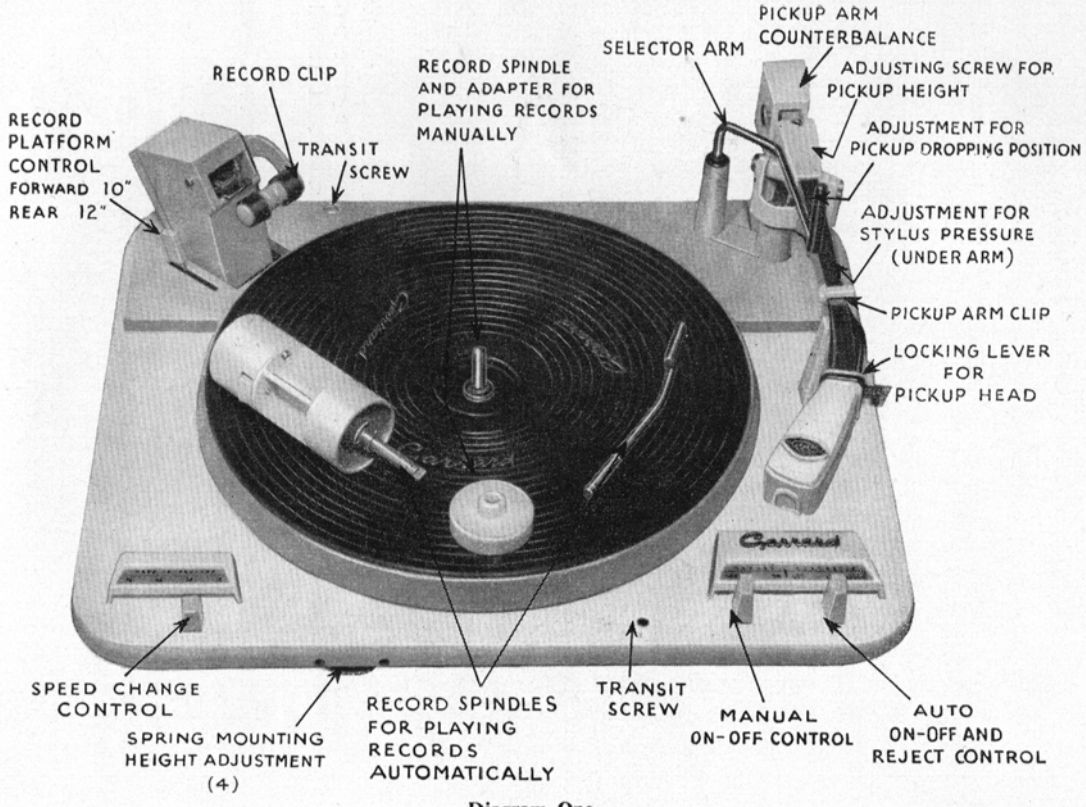

PICKUP ARM COUNTERBALANCE
SELECTOR ARM
RECORD CLIP
RECORD SPINDLE AND ADAPTER FOR PLAYING RECORDS MANUALLY
ADJUSTING SCREW FOR PICKUP HEIGHT
RECORD PLATFORM CONTROL FORWARD 10" REAR 12"
TRANSIT SCREW
ADJUSTMENT FOR PICKUP DROPPING POSITION
ADJUSTMENT FOR STYLUS PRESSURE (UNDER ARM)
PICKUP ARM CLIP
LOCKING LEVER FOR PICKUP HEAD
SPEED CHANGE CONTROL
SPRING MOUNTING HEIGHT ADJUSTMENT (4)
RECORD SPINDLES FOR PLAYING RECORDS AUTOMATICALLY
TRANSIT SCREW
MANUAL ON-OFF CONTROL
AUTO ON-OFF AND REJECT CONTROL

Diagram One

Operation

The Garrard Auto Turntable Type A will play records manually, or any number up to six of the same size and speed, automatically. It will play 7″, 10″ and 12″ records at $16\frac{2}{3}$, $33\frac{1}{3}$, 45 or 78 r.p.m.

Supplied with a short record spindle and adaptor for playing records manually, also a sloping stepped and a large record spindle for playing records automatically.

To operate for manual play:—

1. Set correct stylus for type of record to be played.
2. Move speed change control to correct speed.
3. Place short record spindle in position, also adaptor if playing 45 r.p.m. records with large centre hole.
4. Move record platform to rear position.
5. Place record on turntable, switch on by "manual" control and place pickup on record.

To operate for auto play:—

1. Proceed as for 1 and 2 above.
2. Place stepped or large record spindle in position according to type of record to be played.
3. Set record platform rear position for 12″ and forward position for 10″ records. For 7″ records, platform position is immaterial.
4. Place any number of records up to six of the same size and speed on record spindle and switch on by "Auto" control.

Reject

To reject a record being played, move the Auto Control to "Reject." The pickup will immediately rise and return to its rest position and the motor switch off when playing one record. On "Auto" the next record will drop and the pickup will continue to play.

Stop

To stop leaving the pickup on the record, move the Manual Control to "Off." The pickup will continue to play the same record on using the same control to switch "On." This is useful for temporary stops such as when answering the telephone. To stop the unit with the pickup on its rest, move the Auto Control to "Off." The pickup will immediately rise, return to its rest and the unit switch off.

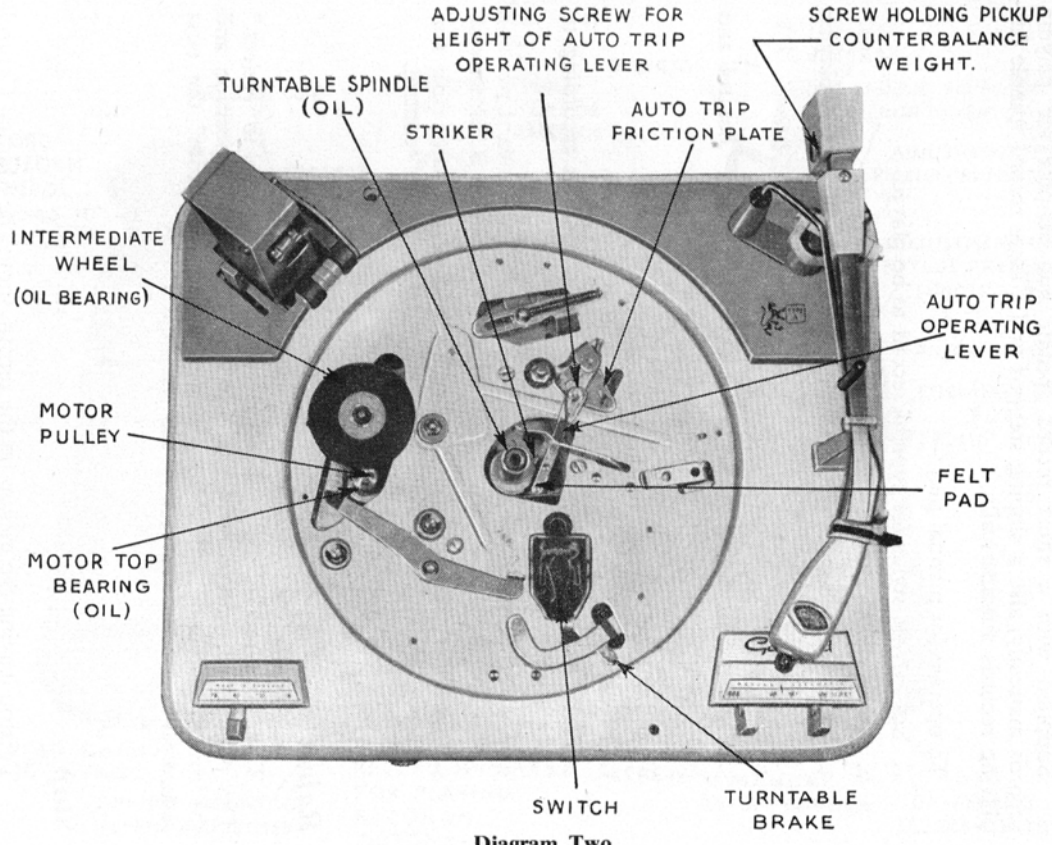

ADJUSTING SCREW FOR HEIGHT OF AUTO TRIP OPERATING LEVER
SCREW HOLDING PICKUP COUNTERBALANCE WEIGHT.
TURNTABLE SPINDLE (OIL)
STRIKER
AUTO TRIP FRICTION PLATE
INTERMEDIATE WHEEL (OIL BEARING)
AUTO TRIP OPERATING LEVER
MOTOR PULLEY
FELT PAD
MOTOR TOP BEARING (OIL)
SWITCH
TURNTABLE BRAKE

Diagram Two

Maintenance

The motor and intermediate wheel bearings are of the oil retaining type and rarely need lubricating. When the need for oil is apparent, hold the intermediate wheel away from contact with the motor pulley and lubricate the top motor bearing with a fine grade of machine oil; that used for sewing machines is suitable. Also lubricate the intermediate wheel bearing, the bearing in the top of the turntable spindle and, very occasionally, the bottom motor bearing. Remove all traces of surplus oil before running and make sure that the motor pulley, running surface of the intermediate wheel and inside of turntable rim are clean and free from oil. Oiling points are shown on diagrams two and six.

To remove turntable to gain access to the oiling points, first remove the turntable mat by pulling it off the centre boss, then lift off the outer turntable. Next remove the nameplate in the centre by levering it upward with a screwdriver or penknife in one of the slots. The retaining clip is then accessible and should be removed. Remove the turntable, with foam mat attached, by lifting with the fingers, applying equal pressure on diametrically opposite sides. Should the turntable be difficult to remove place the short manual record spindle in position and, while lifting the turntable as described, get an assistant to give the top of the record spindle a tap with a piece of wood, such as the handle of a screwdriver.

The turntable should be replaced with unit in switched off position, instructions for its reassembly is given on page six.

Installation

Dimensions

The Type A Auto Turntable is 15″ long by 12¼″ back to front* (see under) by 2⅝″ below and 5¾″ above top of motor board. An additional ¼″ on the height and all round the edges are required to permit unit to freely float on its suspension springs.

*An extra 1¼″ is also required at rear of pickup arm and on right-hand side to allow clearance for counterbalance weight, see template.

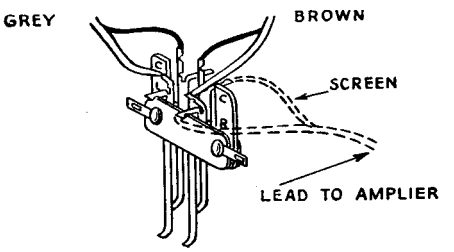
Fitting

The motor board should be drilled and cut out to the template supplied. Do not moisten the template as it may distort, but fix it with self-adhesive tape.

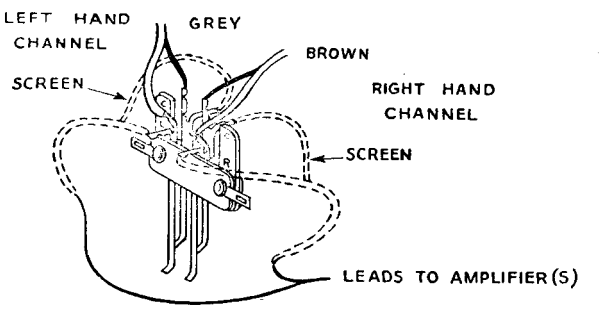
Having opened the carton, remove cardboard packing and accessories. Lift out unit with fingers under the back and front edge of unit plate. The heavy outer turntable and its rubber mat will be found packed under the bottom liner. Remove all string and elastic bands. The spring suspensions assembled to the unit are designed for boards $\frac{1}{2}''$ thick or less. Should the board be thicker than $\frac{1}{2}''$, the four holes should be recessed underneath $1\frac{1}{4}''$ diameter to give a maximum of $\frac{1}{2}''$ thickness. If not already fitted, connect a power supply lead to the connecting block, diagram six. The motor should be earthed by connecting a lead from a good earthing point to the earthing tag located at rear of plate holding connecting block, also connect the audio leads from the amplifier to the pickup connecting strip as shown on diagrams three and four.

Place unit in position over motor board with the flat springs of the spring suspension resting over the $\frac{3}{4}''$ dia. holes and press downward. The flat springs will clip into position. Adjust the unit for level by turning the turn wheels projecting from the edge of the unit plate, diagram five, turning clockwise to lower and counterclockwise to raise the unit. For assembling the pickup counterbalance weight see instructions "Pickup and Arm".

The "Heavy Outer Turntable" has been balanced and to maintain the full advantage of this, marking in the form of two triangles is provided to enable it to be fitted in the intended position with the two triangles facing each other.



Connections for Monophonic Pickups
Diagram Three



Connections for Stereophonic Pickups
Diagram Four

Before shipping, the transit screws (copper plated for identification) should be used to hold the unit firmly to the motor board.

Use the fibre washers under the screw heads to prevent marking plate. These screws must be removed before operating the unit.

Pickup and Arm

Unpack the pickup arm counterbalance weight and slide it on rear of arm, as shown on diagram two, tighten the screw to hold it in position.

If the unit is received without a pickup cartridge, the cartridge of your choice should be fitted by means of the instructions and hardware supplied with the pickup shell.

When the cartridge is in position see that the pointer indicating the stylus pressure on side of arm is in the rear position with the spring tension released. If not, loosen the screw under the arm, slide pointer until it is as far back as it will go and tighten the screw.

Next adjust the position of the counterbalance weight on rear of arm by loosening the screw holding it and sliding the weight along the arm until the point of balance with the pickup head is attained, then firmly tighten the screw.

Now loosen the screw holding the stylus pressure adjustment and slide it forward toward the pickup head until the pointer indicates the stylus pressure required on the scale on the side of the arm.

Voltage and Frequency

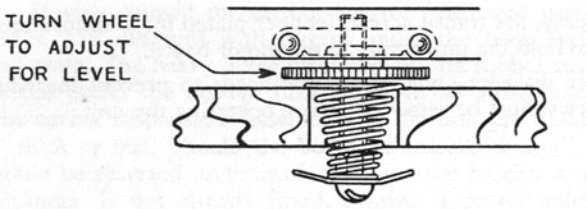
The Garrard Auto Turntable Type A is a dual voltage model, suitable for 100/130 volts and 200/250 A.C. It may be used on 50 or 60 cycles according to the size of motor pulley supplied.

The motor pulleys are colour-finished for easy identification, Nickel for 50 and Brass for 60 cycle power supply.

When ordered for use on either of these frequencies the correct pulley will be fitted.

The motor should be earthed by connecting a lead from the earthing tag, located on rear of bracket holding the connecting block, to a good earthing point, diagram six.

If the unit is connected to an amplifier with its wiring not isolated from the power supply, isolating components, condensers or transformers should be incorporated in the pickup circuit, otherwise the pickup circuit can become live. If in doubt, consult your radio dealer.



SPRING SUSPENSION ASSEMBLY

Diagram Five

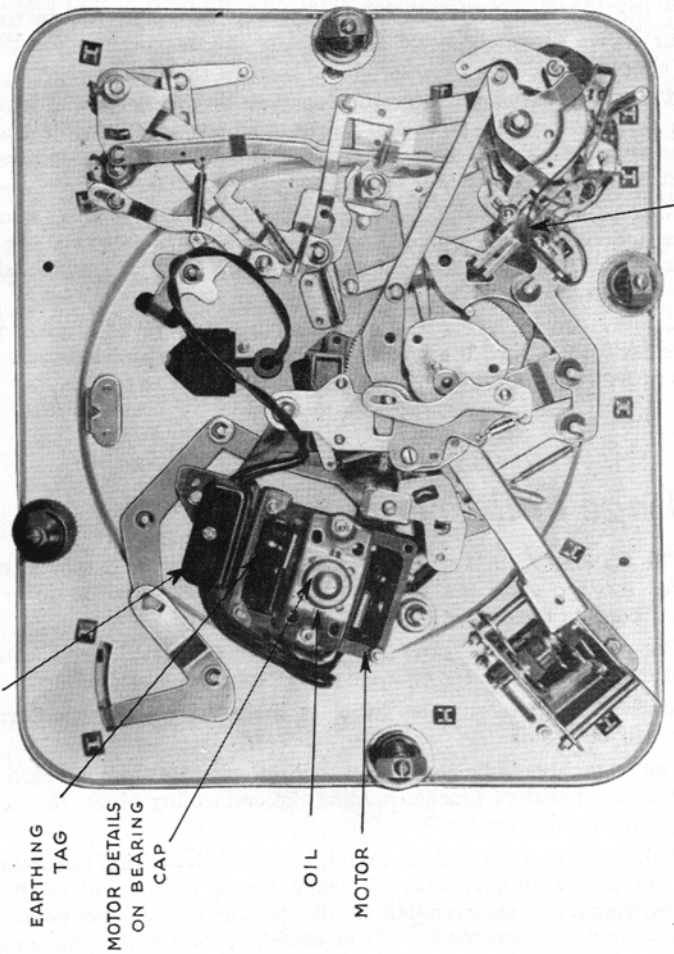


Diagram Six

Service Adjustments

These notes are included to assist in making any minor adjustments that may become necessary. When making an adjustment protect the pickup by fitting its protecting clip, or if a turnover pickup having a safety mid position, turn to this position to protect the styli from possible damage.

Speed

The Garrard Type A Auto Turntable is designed to give the desired turntable speed within close tolerances. Should, however, the turntable run excessively fast or slow, the motor pulley may not be correct for the frequency of the power supply. These pulleys are colour finished for identification, Nickel for 50 and Brass for 60 cycles. To gain access to the motor pulley, remove the turntable as described on page five under "Maintenance".

Should the speed vary during playing, examine the motor pulleys, rubber intermediate wheel and inside of turntable rim for traces of oil, wipe thoroughly with a clean cloth. Check that the motor pulley is in its correct position on the motor shaft and that both screws are tight. See that the intermediate wheel runs in the centre of the appropriate pulley step and does not rub on the side of the adjacent step. If necessary, loosen the screws holding the pulley to the shaft and move pulley to its correct position.

Motors

If the motor fails to start when the unit is switched on, check the power supply to see that current is reaching the motor. Also check the switch and see that the switch blades are clean and making good contact, position shown on diagram two.

Check the position of the voltage change over links on the dual voltage range model and make sure the motor is suitable for the voltage of the power supply. Motor details will be found stamped around the flange of the bottom bearing cover, diagram six.

Pickup Dropping Position

The pickup dropping position is factory set for optimum accuracy, but adjustment may be required after fitting a new pickup cartridge or to play abnormal records. To adjust, turn the horizontal screw situated immediately under the pickup arm cross pivot, clockwise to move pickup inward and counterclockwise to move outward, position shown on diagram one.

Pickup Height

The distance the pickup lifts when on auto can be adjusted by turning the screw on top of the pickup arm just rear of the cross pivot. Turning the screw clockwise raises the pickup, counterclockwise lowers it. The height should be set by placing six records on the turntable and turning the adjusting screw so that the stylus clears the top record by $\frac{1}{8}$" as it passes over it when returning to its rest position.

Pickup Stylus Pressure

The stylus pressure is adjusted as described under "Installation" Pickup and Arm, page seven.

Pickup Tracking

Should there be a tendency for the pickup to track incorrectly especially at low stylus pressures, check that the leads from the rear of the pickup arm are free and clear of the sides of the slot where they pass through the unit plate. Check that the stylus pressure is that recommended by the cartridge manufacturer. Also see that the unit is level by placing a spirit level on a record on the turntable. Check in two directions, side to side and back to front, turning the spring suspension turn wheels to adjust as described on page six.

Pickup Muting Switch

The pickup is muted on both channels by means of two switches which short circuit the pickup connections during the time the changing mechanism is in action.

Auto Trip

The auto trip is of patented design, being extremely light and sensitive in operation. A special feature is that the trip is completely disconnected from the pickup arm at the commencement of the trip operation. It is the well proved velocity type which is actuated by the accelerated movement of the pickup as it reaches the run out groove in the centre of the record. It is set to commence operation when the stylus reaches a radius of $2\frac{7}{8}$" from the centre.

Should the trip fail to operate, leaving the pickup running in the centre of a record, remove the turntable as described on page five and adjust the height of the auto trip operating lever. Give the adjusting screw for height of operating lever, diagram two, about a half turn in a clockwise direction to raise the lever. This will enable it to engage the cam on the striker, as the pickup movement accelerates. Also check that the auto trip friction plate, diagram two, is clean and free from oil and dust.

SPARE PARTS LIST

The Schedule Number printed on the specification label under T.T. mat of the Record Changer is changed whenever non-interchangeable variations are introduced into the mechanism. It is therefore essential when ordering spare parts to quote the Schedule Number of the Record Changer as well as the Reference Number of the part required.

Name of Part	Ref. No.
Record Spindle (Sloping)	B.52764
Record Spindle (Large) Type LRS3 ...	B.52950
Record Spindle (Manual)	A.51347
Adaptor for 45 r.p.m. records	A.50391
Turntable (Inner)	B.53394
Turntable (Heavy Outer)	C.57578
Rubber Mat	C.57422
Foam Mat	A.57753
Pickup Arm (complete)	C.57580
Intermediate Rubber Drive Wheel ...	B.53883
Motor Pulley 50 cycles	A.55643
Motor Pulley 60 cycles	A.55644
Cover for Changeover Block	B.58179
Fixing Nut	A.41012
Cover for Switch Block	A.51327
Fixing Screw	A.40343
Switch Contact Spring	A.41686
Rotor Spindle with Rotor	A.54929
Garrard M5 Multi Purpose Plug-in Pick-up Case Assembly (less cartridge) with open front for turnover cartridges ...	A.56802
Garrard M5 Multi Purpose Plug-in Pick-up Case Assembly (less cartridge) with closed front or turnround or single purpose cartridges	A.56804

Replacement Styli, both Sapphire and Diamond, available for all Garrard Pickups

Genuine Garrard Styli give best results

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